Recycled Material Standard (RMS)

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Today's agenda

1) **Introduce the RMS project**
   - Who
   - What
   - Why

2) **Claim Types**
   - Chain of custody claims
     - Average volume method
     - Credit systems
   - Certificate trading

3) **Next steps**

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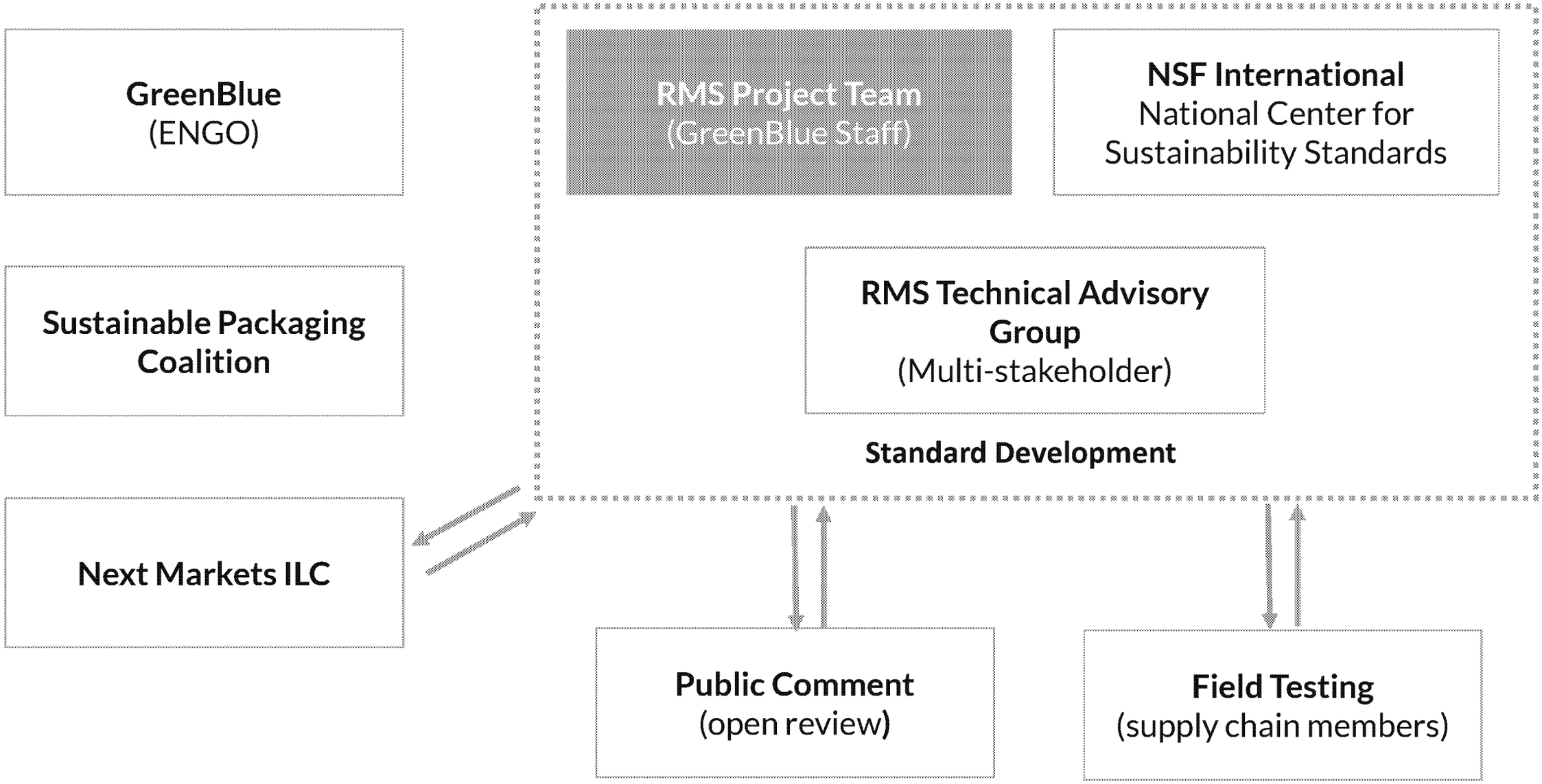
The RMS is a multi-stakeholder initiative



Project scope

The Recycled Material Standard (RMS) is being developed as:

A project of GreenBlue

Third party standard (independently audited)

Voluntary, market based tool to address challenges within recycling value chain

A framework for multiple materials; starting with plastics module

Will incorporate three types of tracking systems for claims

1. Chain of custody – average percentage
2. Chain of custody – credit method (mass balance allocation)
3. Certificate trading – Attributes of Recycled Content (ARCs)

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Our objective

Increase the use of recycled materials through standards development, education and building consensus among stakeholders.

We will be building on existing standards

Reviewing standards:

- materials
- attributes
- commodities

Seeking **alignment** with others where possible (e.g. APR for plastics and EPA for fiber)

Definitions are critical –

- written for each material category
- examples will be included

We will **include a post industrial** material definition

We are proposing new options which will require **consumer testing**

- credit claims
- voluntary trading system

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The RMS will support Global Commitments

The Global Commitment requires "***setting an ambitious goal for recycled content***"

And further seeks:

- Increased use of post consumer material (as defined by ISO 14021)
- Clear transparency and separate tracking of post industrial material
- Verification or certification
- Consistency with food contact, health and safety regulations

Global Commitment Definitions

We are embracing ISEAL Credibility Principles

1. Sustainability
2. Improvement
3. Relevance
4. Rigour
5. Engagement
6. Impartiality
7. Transparency
8. Accessibility
9. Truthfulness
10. Efficiency

#3 Relevance

Standards are fit for purpose. They address the most significant sustainability impacts of a products, process, business or service; only include requirements that contribute to their objectives; reflect best scientific understanding and relevant international norms; and are **adapted where necessary** to local conditions

ISEAL Credibility Principles

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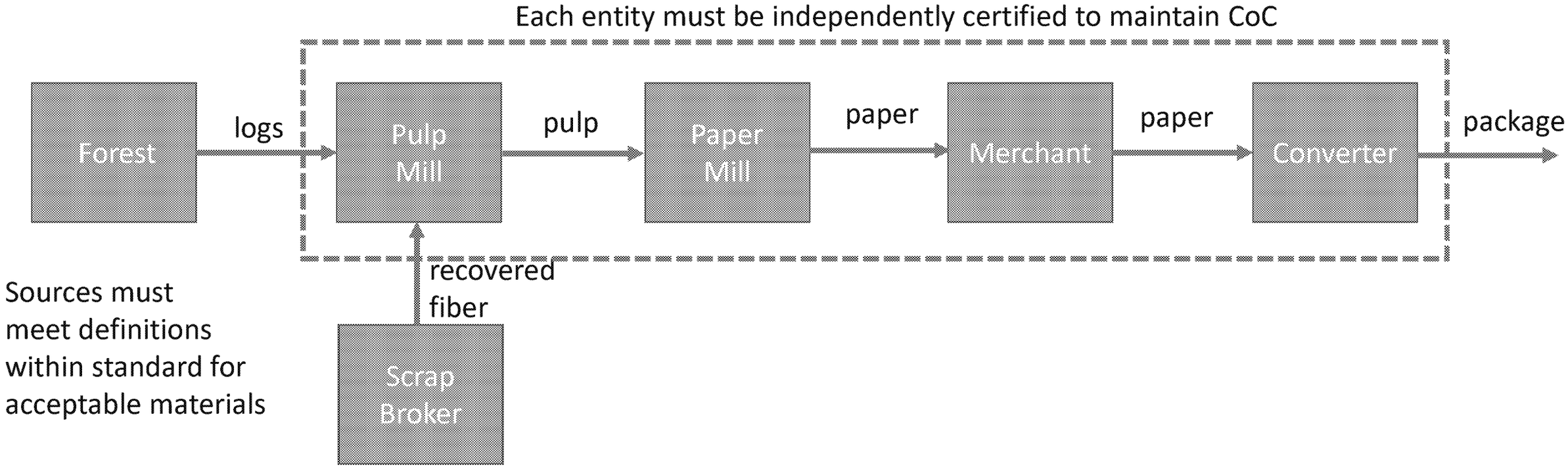
Chain of Custody (CoC) system example

For a chain of custody claim, there must be an **unbroken chain** of organizations, independently certified, covering **every change in legal ownership** – from the point of origin up to the point where a product is finished (and labeled if desired).



Sources must meet definitions within standard for acceptable materials

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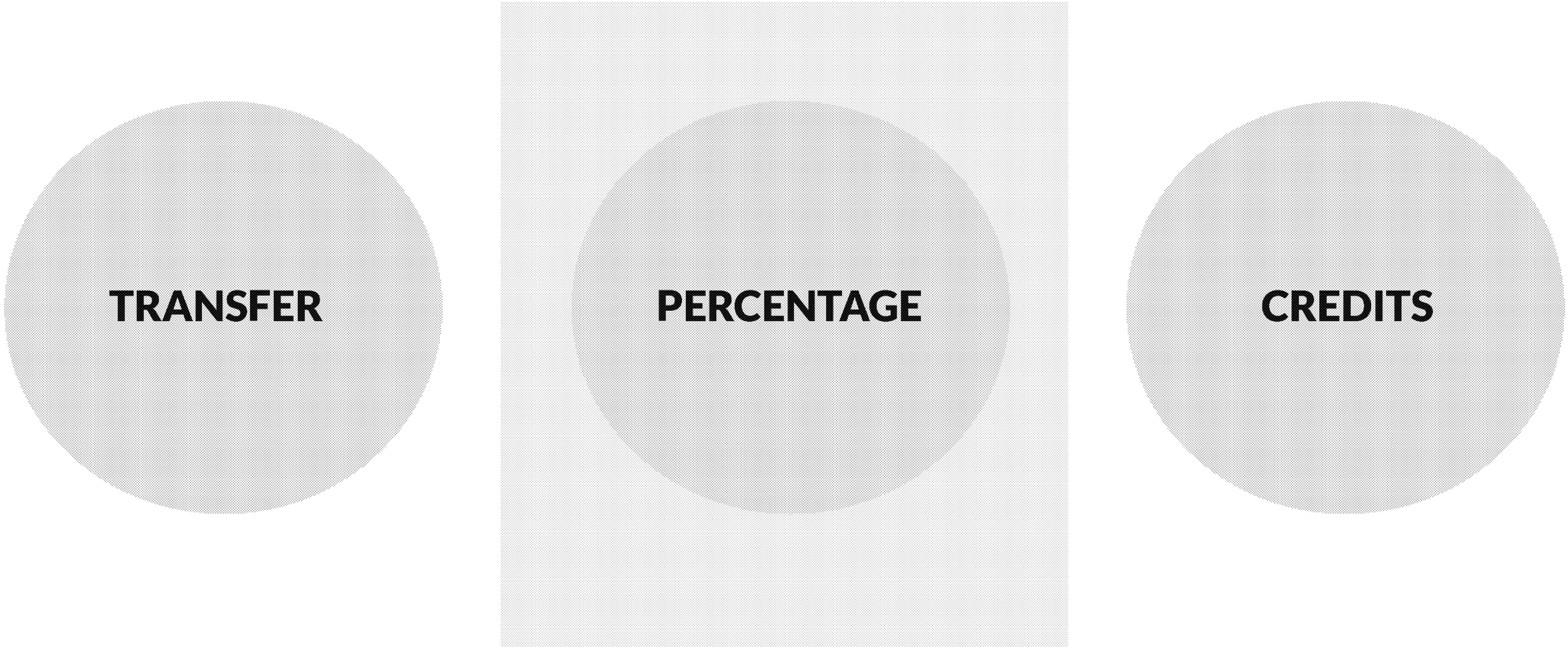
Control systems for chain of custody claims



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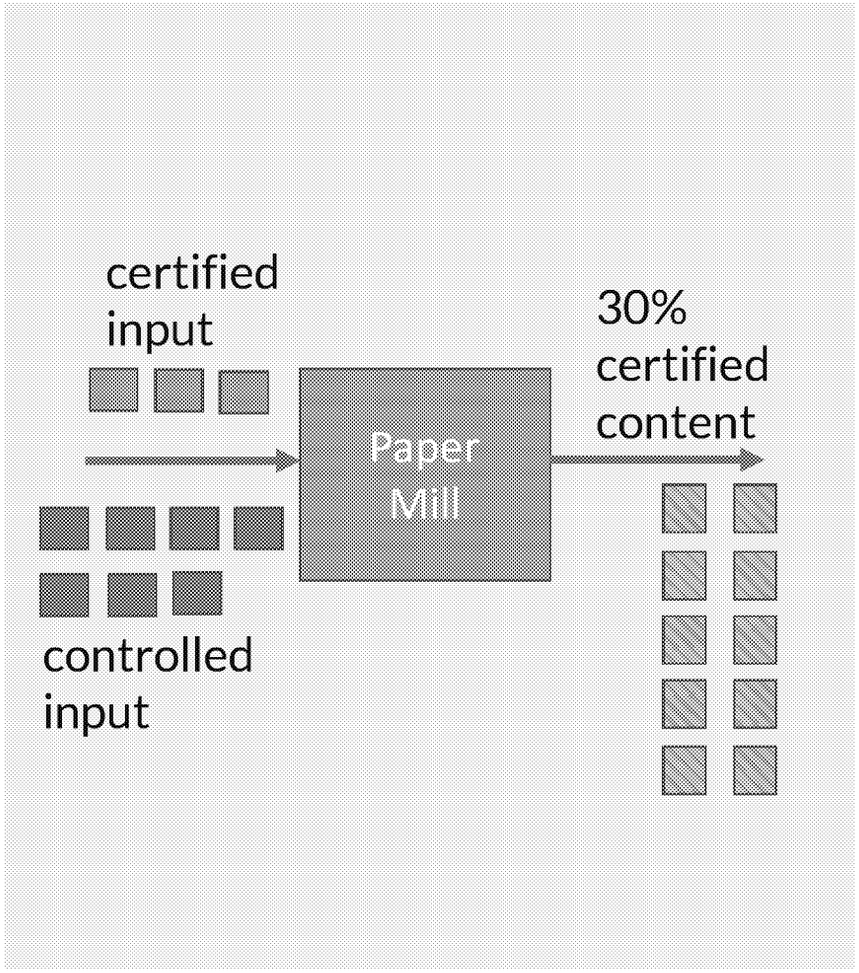
Percentage system claims

outputs are sold with a percentage claim representing the proportion of inputs over a specified period (e.g. 3 month rolling average)

can be applied across multiple sites within an organization (e.g. a paper company with more than one mill)

cannot be applied to simple trading transactions (e.g. merchants)



Most common type of claim for recycled content

Sometimes referred to as volume percentage or a mass basis calculation

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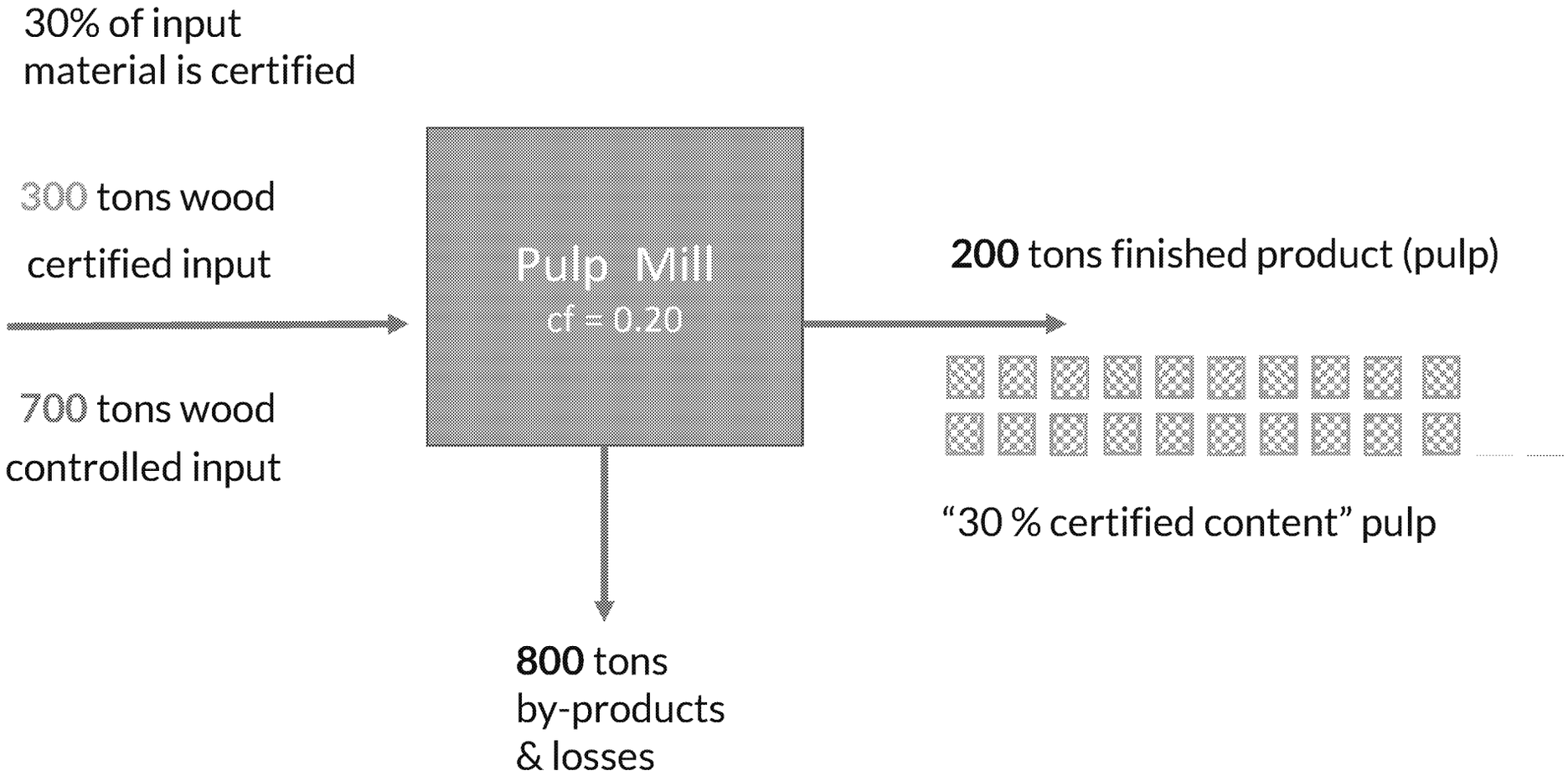
Percentage system example



cf = conversion factor

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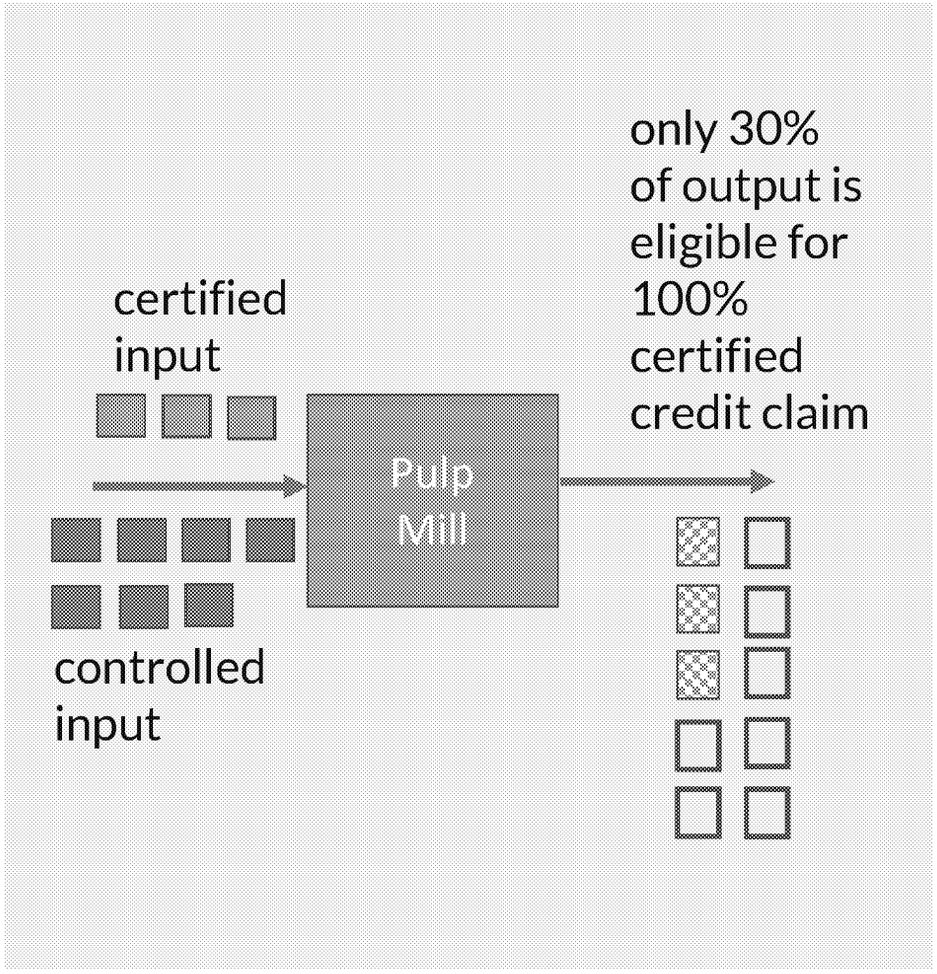
Credit systems for claims (mass balance allocation)

a proportion of the outputs are sold with a credit claim based on a product group **conversion factor**

credits are accumulated from input materials and then allocated to output products

the amount of certified output sold cannot exceed the input quantity

can be applied across multiple sites within an organization



This type of system is widely used for certified forest fiber but not recycled content

This would be a new approach for recycled content

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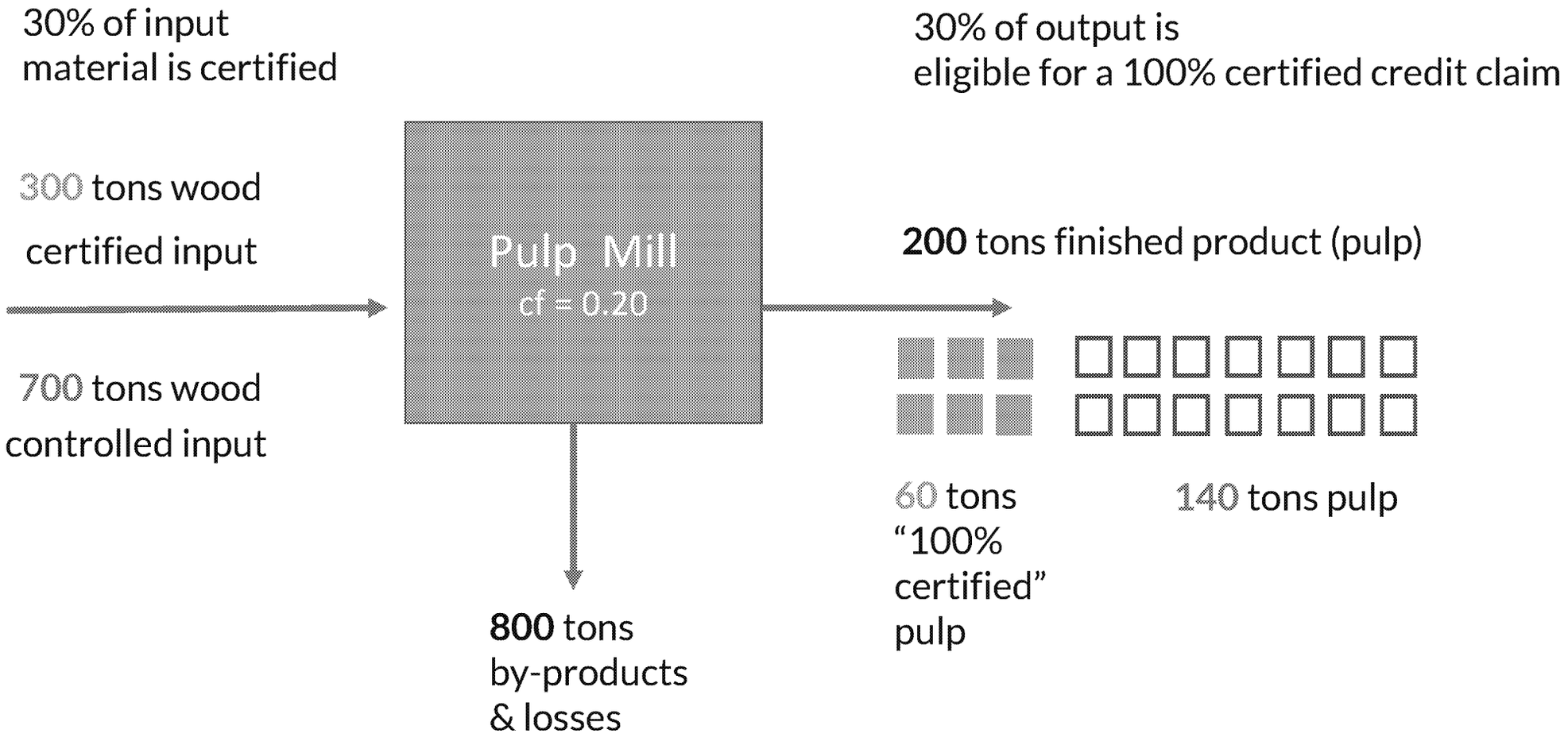
Credit system (mass balance allocation) example



cf = conversion factor

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Examples of labels and claims

Average percentage method

label specifies the average % content
"**At Least xx % Certified Forest Content**"

Volume credit method (Mass balance allocation)

label does not claim a specific content level
"**Promoting Sustainable Forestry** "

SFI Labels and Claims

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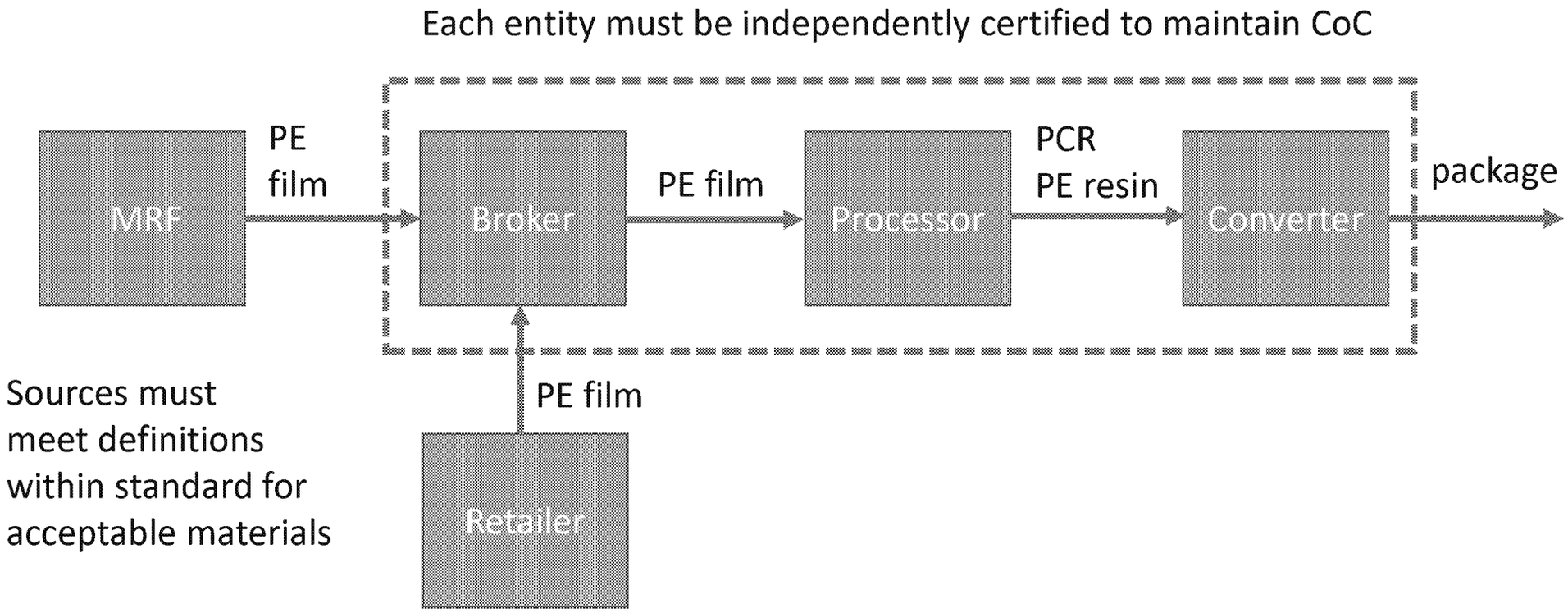
Chain of Custody (CoC) Systems – plastics

For a chain of custody claim, there must be an **unbroken chain** of organizations, independently certified, covering **every change in legal ownership** – from the point of origin up to the point where a product is finished (and labeled if desired).



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Labels and Claims – RMS Prototypes

Average percentage method

label specifies the average % content

"**30% Recycled Plastic**"

Volume credit method (mass balance allocation)

label does not claim a specific content level
"**Promoting Recycled Material and Responsible Sourcing**"

Please note: *These claims/labels have not yet been tested with consumers*

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Renewable Energy Certificates (RECs)

One megawatt
of energy produced by a renewable source as certified by a third party agency against a standard

RECs
are sometimes referred to as the **environmental attribute** bundle associated with renewable electricity generation

Certification assures the energy

is from new projects -
as defined by the standard

is verified -
to validate claims

has not been double counted –
renewable energy is only attributed to the entity that buys the REC

There are two markets

Voluntary RECs –
Purchased to support renewable energy generation; allows for a claim against a company objective or goal

Compliance RECs –
purchased by utilities for compliance with Renewable Portfolio Standards (RPS)

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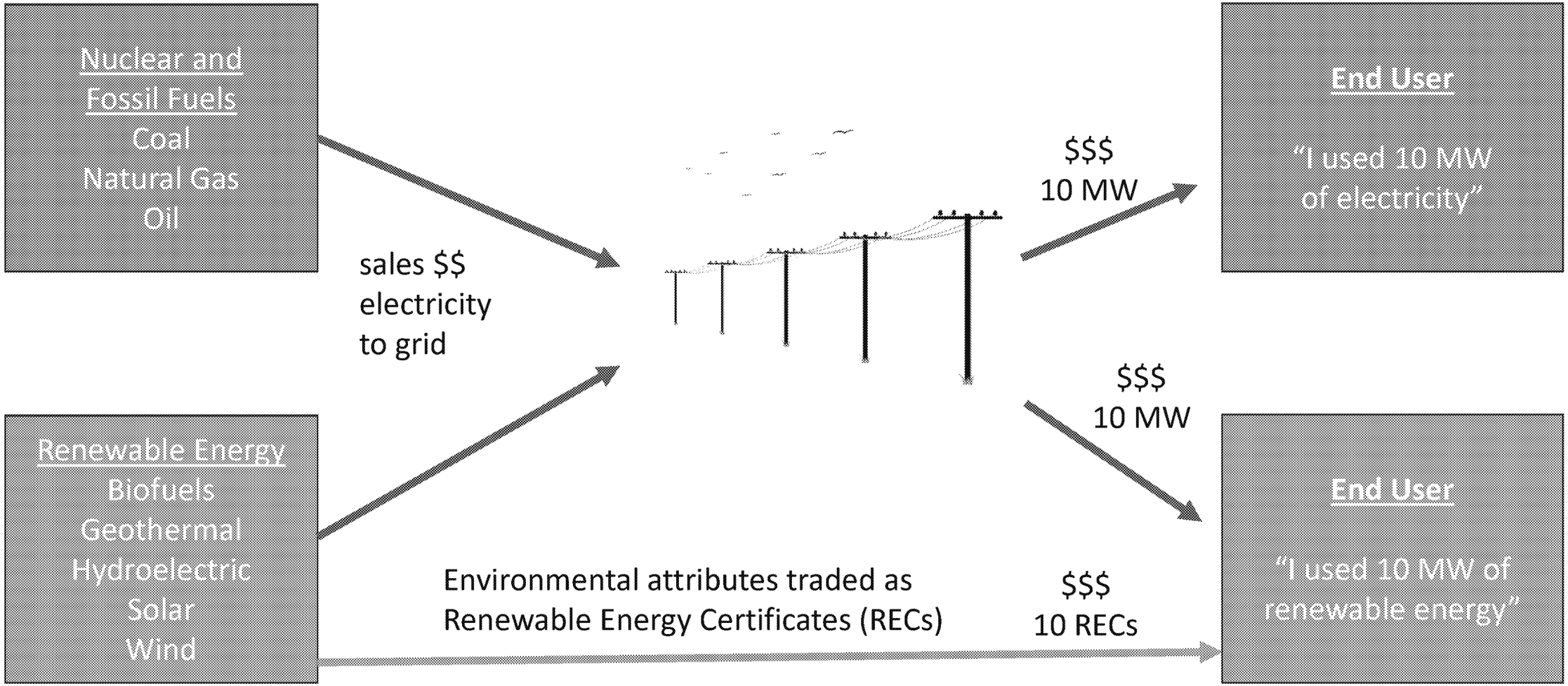

End user pays a premium to claim the environmental attribute

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Attributes of Recycled Content (ARCs)

1000 kgs
of recycled material produced from postconsumer sources as certified by a third party agency against a standard

ARCs
would be referred to as
the **environmental attributes**
associated with processing post-consumer materials

Certification assures the material

is from new projects -
as defined by the standard

is verified -
to validate claims

has not been double counted –
recycled attribute is only attributed to the entity that buys the ARC

There could be two markets

Voluntary ARCs –
Purchased to support processing of recycled material generation; allowing for a claim against a company objective or goal

Compliance ARCs –
purchased by companies for compliance with Extended Producer Responsibility (EPR) programs

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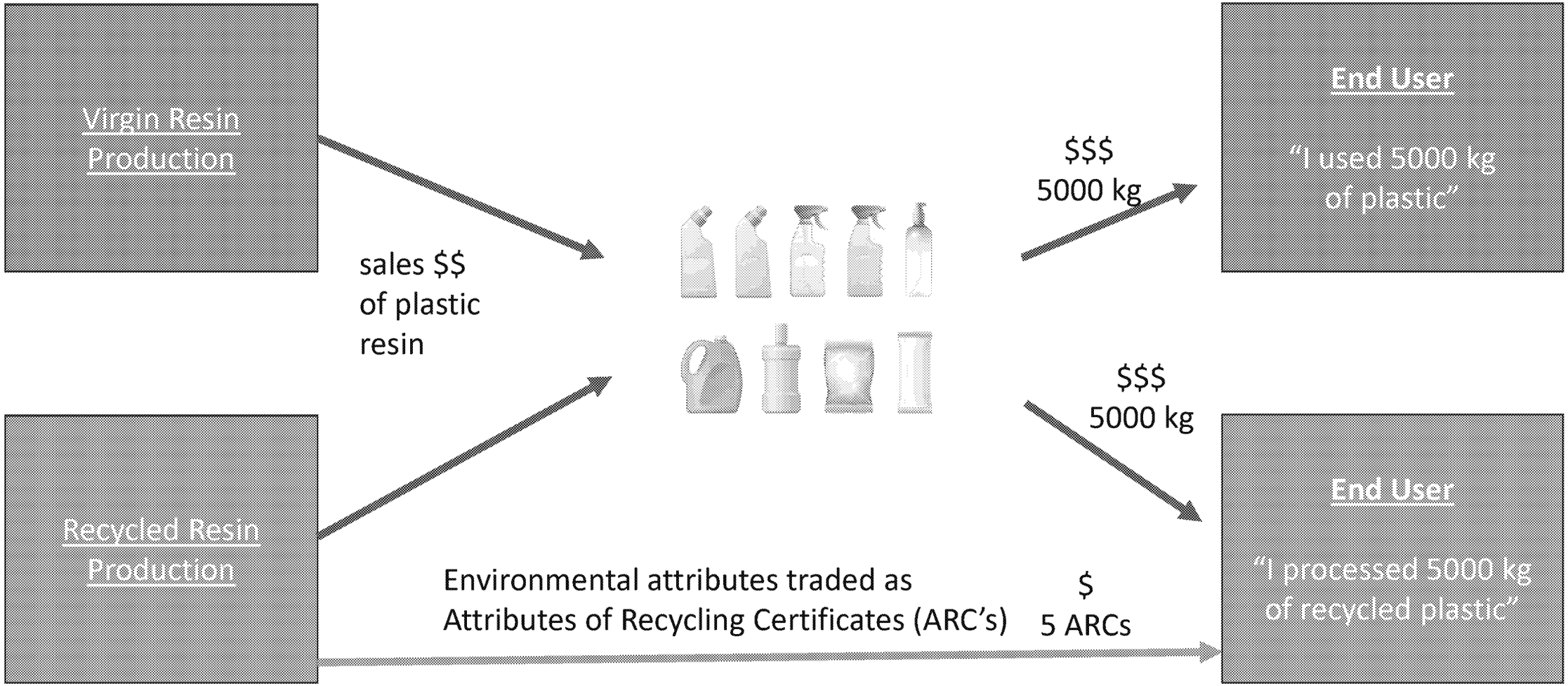

End user pays a premium to claim the environmental attribute

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Participants in a REC trading system

Auditors

Certification Scheme Owner

CRS

CRS is responsible for Green-e standard

Renewable Energy Generator

Utilities
Other generators

Registries

Tracking System

REC Marketers

3 Degrees Inc
Sterling Planet
Many more…

Renewable Energy Purchaser

Any participant

Brands
Converters
Municipalities
Schools

CRS Programs

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Participants in an ARC trading system

Auditors

Registries

Tracking System

Certification Scheme Owner

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Recycled Material Processor

Resin producers
Pulp mills
Smelters
Glass manufacturers

ARC Marketers

Independent trading entities

ARC Purchaser

Any participant

Brands
Converters
Municipalities
Schools

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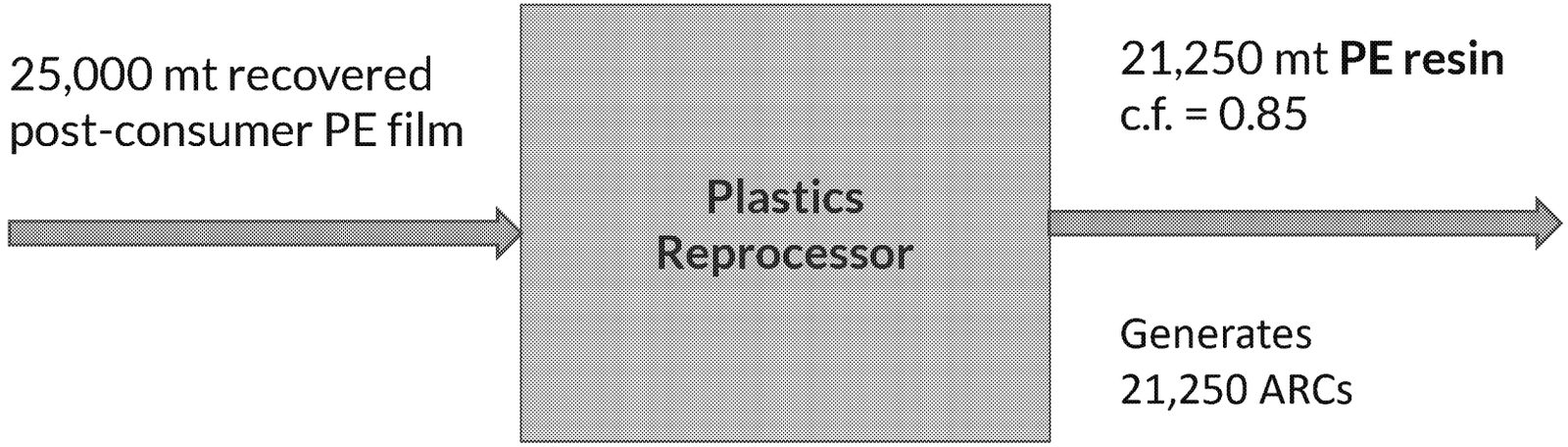
Mechanical Recycling

Illustrative example only – single product group



Plant Sells
Resin: 21,250 mt x $990/mt = $21 million
ARCs: 21,250 ARCs x $75/ARC = $1.6 million
Total = $22.6 million

If the ARCs are unbundled, the resin does not carry a recycling claim

Market demand will dictate the price of ARCs

1 ARC represents 1000 kg of product from feedstock

Assume $75/ARC for PE and $990 per mt resin

ACC Economic Impact Study

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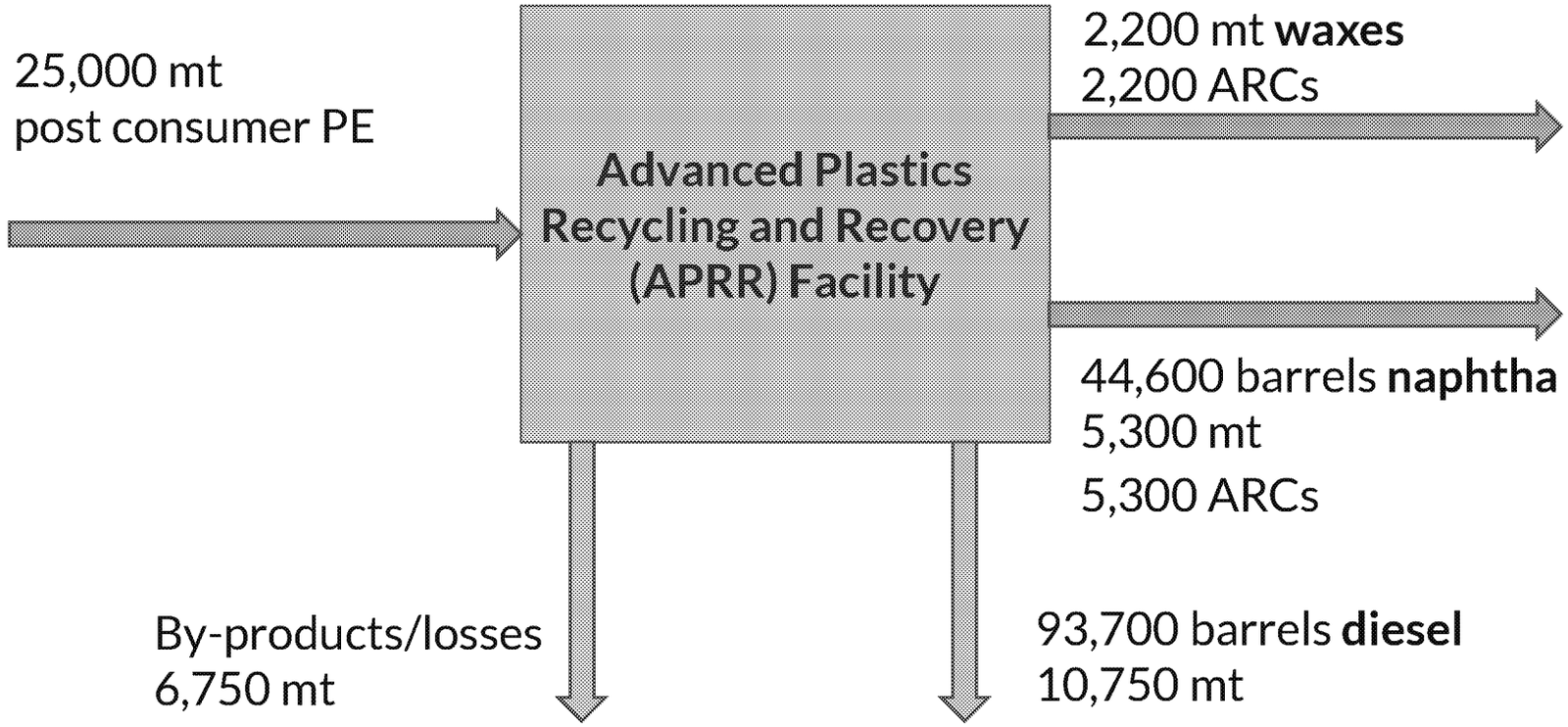
Chemical Recycling

A hypothetical model developed by ACC – three product groups



Materials used as fuel do not generate ARCs

Each product group has a conversion factor (c.f.) which accounts for yield losses

Note:
conversion factors derived from assumptions not provided by ACC

ACC Economic Impact Study

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Next steps

- Complete draft of standard - Sept 2020
- Public review– Sept-Nov 2020
- Finalize standard – Feb 2021

- Field test with supply chain members - Q1/Q2 2021
- Build auditing capacity

Recent news:
Resource Recycling, Setting the Standard
Environmental Law Institute: The Case for a Legislated Market for Plastics

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Let’s connect!

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